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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,363	01/29/2007	Christopher Glen Clemens	70342/UST	1724

86344 7590 02/02/2010
Syngenta Crop Protection, Inc.,
Patent and Trademark Department
410 Swing Road
Greensboro, NC 27409

EXAMINER

BROOKS, KRISTIE LATRICE

ART UNIT	PAPER NUMBER
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1616

MAIL DATE	DELIVERY MODE
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02/02/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/580,363	Applicant(s) CLEMENS ET AL.	
	Examiner KRISTIE L. BROOKS	Art Unit 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 3,4 and 7-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2,5-6, and 13-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Application

1. Claims 1-19 are pending.
2. Receipt and consideration of Applicants amendments/remarks filed on November 18, 2009 is acknowledged.
3. Claims 3-4 and 7-12 are withdrawn from further consideration by the examiner, as being drawn to a non-elected species and claims 1-2, 5-6 and 13-19 are presented for examination. The claims will be examined to the full extent that they read on the elected subject matter of record.
4. Rejections not reiterated from the previous Office Action are hereby withdrawn. The following rejections are either reiterated or newly applied. They constitute the complete set of rejections presently being applied to the instant application.

New Grounds of Rejection

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. Claims 1-2, 5-6, and 13-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shribbs (US 5,741,756) in view of Clough (US 2005/0233986) and Scher et al. (US 5,912,207).

Note: Applicant has overcome the rejection with respect to the combination of the Cu salt of mesotrione and an insecticide and therefore the search was expanded.

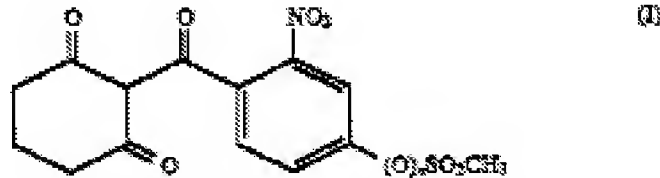
Applicant claims a pesticidally active combination comprising a HPPD-inhibiting herbicide and an insecticide. Applicant also claims a method of controlling undesired plant growth in crops of useful plants, comprising applying the pesticidally active combination.

Determination of the scope and content of the prior art

(MPEP 2141.01)

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Shribbs teach a synergistic herbicidal composition comprising (a) triketones, specifically a cyclohexanedione compound of formula (I)



wherein $n = 0$ or 1 and (B) a chloroacetanilide compound of formula (II) (e.g. metolachlor) for controlling undesirable vegetation in crops (see the abstract, column 1 lines 65-67, and column 2 lines 1-20 and 55-61). The composition may further contain additional actives such as insecticides, in order to broaden the spectrum of activity (see column 5 lines 48-54). The composition may further contain an antidote (e.g. safener) to reduce damage to the crop (see column 5 lines 21-46). Shribbs also teach a method of controlling the growth of undesirable vegetation comprising apply the composition of the invention to the locus (i.e. soil, seeds, seedlings) (see column 3 lines 35-39).

Ascertainment of the difference between the prior art and the claims

(MPEP 2141.02)

Shribbs et al. teach that an instantly claimed HPPD-inhibiting herbicide of formula IB can be combined with an insecticide but do not teach any specific insecticide (e.g. cyhalothrin). Shribbs et al. further do not teach the HPPD-inhibiting herbicide in the form of a salt. These deficiencies are cured by the teachings of Clough and Scher et al.

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Clough teaches an insecticidal mixture comprising gamma-cyhalothrin and one or more active ingredients (i.e. herbicides) (see the abstract, page 1 paragraphs 1 and 2, and page 7 paragraph 116). Examples of herbicides include triketones (acetamides (i.e. metalochlor)), etc. (see page 3 paragraphs 49 and 76). The mixture is useful in treating a wide range of pests (see page 6 paragraphs 105 and 114-115).

Scher et al. teach stable herbicide compositions comprising the instantly claimed triketones of formula IB (i.e. 2-(2'-nitro-4'-methylsulfonyloxybenzoyl)-1,3-cyclohexanedione) can be present in salt form, especially copper or zinc salts (see columns 3-5, column 7 lines 39-51, Examples 1-9, and clams 1-13).

Finding of prima facie obviousness

Rational and Motivation (MPEP 2142-2143)

One of ordinary skill in the art would have been motivated to make a pesticidally active combination comprising an HPPD-inhibiting herbicide and an insecticide because Shribbs et al. suggest that the instantly claimed HPPD-inhibiting herbicide can be combined with insecticides for the purpose of broadening the spectrum of activity. And it is known in the art that insecticides such as gamma-cyhalothrin can be combined with herbicides (i.e. triketones metalochlor, etc) in the treatment of pests.

Thus, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to make a pesticidally active combination

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comprising an HPPD-inhibiting herbicide and an insecticide for the purpose of further broadening the spectrum of activity against undesirable pests.

Although Shribbs et al. do not teach the instantly claimed HPPD-inhibiting herbicide (e.g. 2-(2'-nitro-4'-methylsulfonyloxybenzoyl)-1,3-cyclohexanedione) in the form of a salt, it is well known in the art that the instantly claimed compound can be used in the form of a salt in herbicidal formulations for the purpose of preparing a chemically stable composition, as suggested by Scher et al. Thus, it would have been obvious to one of ordinary skill in the art to use the instantly claimed HPPD-inhibiting herbicide in the form of salt for the purpose of enhancing stability of the agrochemical formulation.

Therefore, the claimed invention would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made because the prior art is fairly suggestive of the claimed invention.

Response to Arguments

Applicant's arguments filed November 18, 2009 have been fully considered but they are not persuasive.

Applicant argues that Shribbs et al. and Clough merely suggest that HPPD inhibiting herbicides can be combined with insecticides in general broad terms and would not have led one of ordinary skill in the art to the make a composition comprising the salt form of a HPPD inhibiting herbicide and an insecticide. Applicant also argues that the present claims are drawn to a substantial selection over the largely generic disclosure of Shribbs et al. and Clough.

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This argument is not persuasive. First, it should be noted that Applicant is not claiming any specific combination of compounds. Applicant is broadly claiming a salt of any HPPD inhibiting herbicide (other than compounds of formula A) and any insecticide (see claim I). Thus, the claim itself is extremely broad and encompasses a wide variety HPPD inhibiting herbicides and insecticides of different structural formulas, physical and chemical properties.

Shribbs et al. is specifically drawn to the use of two of the instantly claimed triketones (HPPD inhibiting herbicide) (see the abstract, column 1 lines 40-49 and 65-67, and column 2 lines 1-23). Shribbs et al. further teach that the compounds can be combined with insecticides to broaden the spectrum of activity. Shribbs et al. do not teach a specific insecticide but it is known in the art that the gamma-cyhalothrin can be combined with triketones for control of pests, as suggested by Clough. Thus, it would have been obvious to one of ordinary skill in the art to incorporate gamma-cyhalothrin into the composition taught by Shribbs et al. in order to broaden activity against pests. Further, it is noted that Shribbs et al. do not teach the salt form of the instantly claimed triketone (i.e. 2-(2'-nitro-4'-methylsulfonyloxybenzoyl)-1,3-cyclohexanedione)). However, it is known in the art that the instantly claimed compound can be prepared in the salt form in order to prepare a stable composition. Thus, one of ordinary skill in the art would use the salt form of the HPPD inhibiting herbicide in order to enhance stability of the composition.

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Applicant further argues that the combination of an agrochemically acceptable salt of an HPPD inhibiting herbicide and insecticide is used, crop damage is considerably reduced.

Applicant has provided data that compares phytotoxicity of mesotrione in free form, the copper salt form of mesotrione, the combination of mesotrione and four insecticides, and the combination of the copper salt form of mesotrione and four insecticides. The combination of the copper salt form of mesotrione and the insecticides were shown to have reduced phytotoxicity level when compared to free form of mesotrione and the four insecticides (see pages 19-28 of the instant specification).

Applicant's data is persuasive with respect to the combination of the copper salt of mesotrione and four insecticides (i.e. chlorpyrifos-methyl, terbufos, tefluthrin, and thiamethoxam). However, Applicant's data is not commensurate in scope with the claimed invention. The instant claim is drawn to an extremely wide variety of herbicides with different structural formulas as well different chemical and physical properties and any insecticide. Applicant has not provided any data to suggest that the safening effect observed with a copper salt of mesotrione and four insecticides (i.e. chlorpyrifos-methyl, terbufos, tefluthrin, and thiamethoxam) would work in the same manner for a combination of any other HPPD inhibiting herbicide and any insecticide, especially considering the extremely large amount of structurally different compounds and combinations are encompassed by the claim. Therefore, Applicant's data is persuasive with respect to the combination of the copper salt of mesotrione and four insecticides (i.e. chlorpyrifos-methyl,

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terbufos, tefluthrin, and thiamethoxam. However, the data is not commensurate in scope with the claimed invention.

Conclusion

7. No claims are allowed.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kristie L. Brooks whose telephone number is (571) 272-9072. The examiner can normally be reached on M-F 8:30am-6:00pm Est..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on (571) 272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Johann R. Richter/

Supervisory Patent Examiner, Art Unit 1616